

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINERAL RESOURCES MANAGEMENT

OPERATOR

POND/IMPOUNDMENT PLAN

Applicant's Name **American Energy Corporation** Pond/Impoundment # **014 As Built**

Type of pond/impoundment **Excavated**

Permanent ☐

Temporary ☒

1. DRAINAGE AREA DATA:

- a) Drainage area **66.0** acres
- b) Disturbed area **61.5** acres
- c) Ave. land slope **25.0** %
- d) Hydrologic soil group **C**
- e) Hydraulic length **5077** ft.
- f) Cover/condition of the undisturbed area **Pasture/Fair**

2. DESIGN STORM CRITERIA:

a) Method:

- 1) Design method(s) including computer programs: **SEDCAD, FLOWMASTER**
- 2) NRCS curve number **87**

b) Rainfall Amount/Peak Flow

Rainfall, in.

Peak flow, cfs.

- 1) 10 year, 24 hour = **3.7** **101.9**
- 2) 25 year, 24 hour = **4.2** **121.1**
- 3) 50 year, 6 hour =
(if permanent)
- 4) 100 year, 6 hour =
(if 20/20 size)

3. SIZE:

a) Dimensions:

- | | | | | | |
|---------------|------------------|-----|-------------------------|--------------------------------|---|
| 1) Dam height | 3.0 | ft. | 4) Dam downstream slope | 36 (AVG) | % |
| 2) Dam width | 12 (min.) | ft. | 5) Dam upstream slope | 36 (AVG) | % |
| 3) Dam length | 1435 | ft. | 6) Core length | N/A ft. N/A ft. N/A ft. | |

b) Sediment storage volume **12.9** ac. ft. is provided below the **1168.3** foot elevation.

c) Stage/Area Data:

	Elevation ft.	Surface Area ac.	Volume ft.
1) Bottom of pond/impoundment	1160.0	0.115	0.0
2) Streambed at upstream toe:	N/A	N/A	N/A
3) Principal spillway inlet:	1168.3	2.276	12.90
4) Emergency spillway crest:	1170.5	2.542	18.2
5) Top of embankment:	1172.0	2.70	22.1

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4. PRINCIPAL SPILLWAY:

- a) Pipe length **76** ft.
- b) Pipe diameter **14 (I.D.)** in.
- c) Pipe slope **3.0** %
- d) Riser diameter **34 (I.D.)** in.
- e) Riser height **5.8** ft.
- f) Type of pipe **HDPE**
- g) Number of anti-seep collars **1**; spacing along pipe **40** ft.
- h) Does the design include a trash rack? ☒ Yes, ☐ No.
- i) Does the design include an anti-vortex device? ☒ Yes, ☐ No.

5. EMERGENCY SPILLWAY/EXIT CHANNEL:

- a) Base width **12** ft.
- b) Design flow depth **0.5** ft.
- c) Exit slope **12.0** %
- d) Exist velocity **2.53** fps
- e) Channel lining **2" ROCK RIPRAP**
- f) Side slopes **2:1 (max.)**
- g) Freeboard **1.5** ft.
- h) Entrance slope **36** %
- i) Length of level control section **20** ft.

6. The minimum static factor of safety for this impoundment is **1.5**

7. Provide as an addendum to this attachment a detailed plan view or 2 cross sections of the impoundment.

8. COMMENTS:

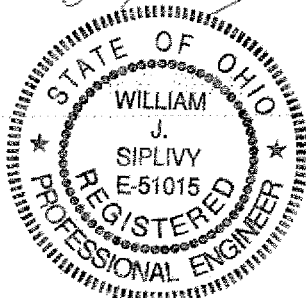
9. Is this an MSHA structure? ☐ Yes ☒ No. If "yes," provide the MSHA ID number if one has been assigned

10. If this is to be retained as a permanent impoundment, submit an addendum to this attachment demonstrating compliance with 1501:13-9-04 of the Administrative Code.

11. I hereby certify that this impoundment is designed to comply with the applicable requirements of 1501:13-9-04 of the Administrative Code using current, prudent engineering practices.

William J. Siplivy
Signature

25 October 2006
Date



Part 3: Section A/H